

Pranav Minasandra, Ph.D.

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Interests Novel and generally applicable theories of behaviour in animals; methods to explore behavioural dynamics. I am particularly interested in the dynamics of behaviour at the intersection of multiple timescales, and the *behavioural algorithms* used by animals to express individual, collective, and social behaviour.

Employment **Max Planck Institute of Animal Behaviour, Konstanz, Germany** 2024 - now
Postdoctoral researcher; IMPRS-QBEE Postdoc Awardee.

Education **Max Planck Institute of Animal Behaviour, Konstanz, Germany** 2020 - 2024
PhD [Dr. rer nat] *magna cum laude* - International Max Planck Research School of Quantitative Behaviour, Ecology, and Evolution. Thesis: “*Exploring sequences of behaviour across scales and species.*”

Indian Institute of Science (IISc), Bengaluru, India 2015 - 2020
- Master of Science in Biology
- Bachelor of Science (Research) in Biology

Publications

1. **Minasandra, P.** *et al.* Behavioral sequences across multiple animal species in the wild share common structural features. *PNAS* **122**, e2503962122. doi:[10.1073/pnas.2503962122](https://doi.org/10.1073/pnas.2503962122) (2025).
2. DeNicola, V., Mezzini, S., Bursac, P., **Minasandra, P.** & Cagnacci, F. Effects of vasectomy on breeding-related movement and activity in free-ranging white-tailed deer. *Movement Ecology*. doi:[10.1186/s40462-025-00554-5](https://doi.org/10.1186/s40462-025-00554-5) (2025).
3. **Minasandra, P.** *et al.* Accelerometer-based predictions of behaviour elucidate factors affecting the daily activity patterns of spotted hyenas. *Royal Society Open Science* **10**, 230750. doi:[10.1098/rsos.230750](https://doi.org/10.1098/rsos.230750) (2023).
4. Grout, E. M. *et al.* Whole Group Tracking Reveals That Relatedness Drives Consistent Subgrouping Patterns in White-Nosed Coatis. *Animal Behaviour* **216**, 175–193. ISSN: 0003-3472. doi:[10.1016/j.anbehav.2024.08.010](https://doi.org/10.1016/j.anbehav.2024.08.010) (2024).
5. Kunjar, S. *et al.* Link updating strategies influence consensus decisions as a function of the direction of communication. *Royal Society Open Science* **10**, 230215. doi:[10.1098/rsos.230215](https://doi.org/10.1098/rsos.230215).
6. **Minasandra, P.** & Isvaran, K. Truncated power-law distribution of group sizes in antelope. *Behaviour* **157**, 541–558. doi:[10.1163/1568539X-bja10012](https://doi.org/10.1163/1568539X-bja10012) (2020).

Awards and fellowships **University of Konstanz—Best Paper Award**
Chosen from among several nominations. [200 €]

IMPRS Postdoctoral Award 2024-2025
6 months of pay at the scale of a postdoctoral researcher. [32,350 €]

ISBE Travel Award 2024
2500 AUD [≈1,500 €].

DAAD - Graduate Student Scholarship Programme 2020 - 2024
Nominated after evaluation of my proposal. [≈60,000€]

Kishore Vaigyanik Protsahan Yojana

Govt. of India scholarship for exceptional undergraduates in science. *All India Rank : 135*
Included stipend and contingency

2015 - 2020

Mentorship**Amlan Nayak**

Master's thesis: Spatial variation of vigilance in meerkats.

Ananya Passi

Summer research: Mathematical modelling of habitat use and population dynamics.

Teaching**Introduction to Git**

Instructor and organiser: Biannual workshop offered at the MPI of Animal Behavior.

Introduction to remote code servers like GitHub

Instructor and organiser: Biannual workshop offered at the MPI of Animal Behavior.

L^AT_EX for academic documents

Instructor and organiser: Annual workshop offered at the MPI of Animal Behavior.

Quantitative Ecology: Research Design and Inference

Teaching assistant: Taught coding in R, conducted several classes, graded assignments, managed course website.

2019

Talks and posters**[Invited] CES Seminar Series**

Indian Institute of Science, Bangalore

“Exploring sequences of behaviour in the wild across scales and species”

2024

International Society of Behavioural Ecology Meeting

Melbourne, Australia

“Sequences of behaviour show a common statistical structure across species”

2024

Gesellschaft für Primatologie Annual Conference

Konstanz, Germany

“How animals behave: Sequences of behavior show a common statistical structure across species”

2024

Descriptive & Normative Models of Collective Behaviour

School of Mathematics, University of Leeds

“Looking into hyena daily activity patterns using accelerometers”

2022

Animal Behaviour Society - Virtual Seminar 2021

“Behavioural classifier provides insights into spotted hyena behaviour”

2021

Technical skills

Programming languages and related

Python, Julia, R, Bash, L^AT_EX, and C. HTML, CSS, and git.

Specialised computational skills

Machine learning; Parallel processing and Inter-Process Communication; Agent-based models; Analysis of complex multivariate time-series data.

Mathematical modelling

Dynamical (PDE) models incorporating spatial and stochastic variables; Probability models; Numerical simulations of all the above.

References

Dr Ariana Strandburg-Peshkin,
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Dr Alex L Jordan,
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Dr Andrew Berdahl,
University of Washington
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Prof Meg Crofoot,
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